

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (canceled)
2. (previously presented) The integrated circuit chip of claim 8, further comprising a passive component selected from the group comprising resistors, capacitors, and inductors.
3. (previously presented) The integrated circuit chip of claim 8, wherein the first electrically conductive material is polysilicon.
4. (previously presented) The integrated circuit chip of claim 8, wherein the second electrically conductive material is aluminum.
5. (previously presented) The integrated circuit chip of claim 8, wherein the spark gap cavity contains a noble gas for reducing the breakdown voltage of the electrostatic discharge protection device.
6. (previously presented) The integrated circuit chip of claim 8, wherein the substrate material is selected from the group comprising silicon, glass and a ceramic material.

7. (previously presented) A method of fabricating an integrated circuit chip comprising an integrated circuit and an electrostatic discharge protection device, the method comprising:

- providing a semiconductor substrate,
- depositing an insulating layer on the semiconductor substrate,
- depositing a first electrically conductive layer of a first electrically conductive material on said insulating layer,
- depositing a dielectric layer of a dielectric material directly on said first electrically conductive layer,
- etching the dielectric layer to form a window for a center electrode,
- etching the first electrically conductive layer under the dielectric layer to form a toroidal spark gap cavity with a vertical gap between the insulating layer and the dielectric layer, wherein an exposed surface of the first electrically conductive layer forms a circumferential electrode,
- depositing a layer of a second electrically conductive layer through the window to form the center electrode in mechanical contact with the insulating layer and to seal the toroidal spark gap cavity with a lateral gap between the first and second electrically conductive layers,
- connecting the center electrode to input circuit paths to be protected from electrostatic discharge, and
- connecting the circumferential electrode to an electrostatic discharge path comprising either a connection to a circuit ground or a circuit supply voltage.

8. (previously presented) An integrated circuit chip comprising:
at least one integrated circuit; and
an integrated electrostatic discharge protection device, the electrostatic discharge protection device comprising:
an insulating layer disposed on a substrate layer, the insulating layer of an electrically insulating material to form a base layer of a toroidal spark gap cavity;
a first electrically conductive layer disposed on the insulating layer, the first electrically conductive layer of a first electrically conductive material to form a circumferential electrode with an outer side wall to define a window for the toroidal spark gap cavity;
a dielectric layer disposed on the first electrically conductive layer, the dielectric layer of a dielectric material to form a cover layer of the toroidal spark gap cavity; and
a second electrically conductive layer partially disposed directly on the dielectric layer and extending into the window for the toroidal spark gap cavity to be partially disposed directly on the insulating layer, the second electrically conductive layer of a second electrically conductive material to form a center electrode with an inner side wall that is laterally separated from the outer side wall of the first conductive layer by the toroidal spark gap cavity.
9. (previously presented) The integrated circuit chip of claim 8, wherein the dielectric layer extends at least partially over the window of the toroidal spark gap cavity formed by the first electrically conductive layer.
10. (previously presented) The integrated circuit chip of claim 9, wherein the dielectric layer is vertically separated from the insulating layer by the toroidal spark gap cavity.
11. (previously presented) The integrated circuit chip of claim 8, further comprising means for electrically connecting the center electrode to input circuit paths to be protected from electrostatic discharge.

12. (previously presented) The integrated circuit chip of claim 8, further comprising means for electrically connecting the circumferential electrode to an electrostatic discharge path comprising a connection to a circuit ground or a circuit supply voltage.

13. (previously presented) The integrated circuit chip of claim 8, wherein the toroidal spark gap cavity is an annular cavity defined by the inner side wall of the second electrically conductive layer, the outer side wall of the first electrically conductive layer, the base layer of the insulating layer, and the cover layer of the dielectric layer.

14. (previously presented) The method of claim 7, wherein depositing the second electrically conductive layer further comprises at least partially depositing the second electrically conductive layer on and in direct contact with the dielectric layer.